ANALYSIS OF BODY COMPOSITION, ANTHROPOMETRIC MEASURES AND EMOTIONAL INTELLIGENCE AMONG BODY BUILDERS AND ATHLETES

A SYNPOSIS (RESEARCH PROPOSAL) SUBMITTED TO

SWAMI RAMANAND TEERTH MARATHAWADA UNIVERSITY NANDED

FOR FULFILLMENT OF THE Ph.D.IN

PHYSICAL EDUCATION

BY

VINAY S.

M.P.Ed. , M.Phil

UNDER THE GUIDANCE OF

Dr. Y.D.KALEPWAR

SAS COLLEGE, MUKHED

June 1, 2016

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INTRODUCTION

Physical structure or the body is the most precious possession of any individual. Everybody wish to have the most robust, beautiful and attractive body. Today body building is both an art and science, which involves lot of effort from the individual who wishes to do so. The concept of body building has influenced the society from time immemorial, today we are aware of various competitions also being held for body builders.

Though all sportspersons are broadly termed as athletes, in the present study we consider those who are competing in the track and field events as the athletes. Whether an athlete or a body builder or any other individual- all are very much interested in understanding their body composition. The term body composition refers to the ratio between body fat and lean body mass or the muscle mass of an individual. Body mass influences the performance of both body builders and the athletes. But the degree of requirement of the ratio between the lean body mass and body fat differs. Thus the study helps us to understand the essential body composition for each of this groups being selected in the present study.

Every person whatever his physical capacities may be, he is also influenced by the psychological aspects. Emotion is one of the major components of psychology which determines the behavior of

an individual. Thus emotion also influences the performances of both body builders and the athletes. Emotions are at times great factors of motivation and if not well directed and controlled can also ruin a sports person's career. Emotional behavior is universal to all the species in absence of emotion all the species in universe are considered as lifeless. According to crow and crow, "emotion is an affective experience that accompanies generalized inner adjustment and mental and physiological stirred up states in the individual and that shows itself in it's over behavior.

Thus the study of any factors of emotions, its role or influences definitely will be welcome by the sports fraternity.

NEED OF THE STUDY

1. Every individual need to know about his or her structure of the body. Nowadays many young people are crazy about building up the body. But they lack in the knowledge how to build an proportional body. There is a need to give make them aware about the structure of the body. This study will help them to understand bodily concepts and thereby they can implement certain changes in their daily routine. As said earlier emotion is a very important trait which influences every movement at all moments and movements. Especially controlling of emotions is very important for a sportsman. Sportsman should have a knowledge with regard to degree of emotions which must be maintained. The study helps to analyze emotional attributions among the Athletes and body builders.

STATEMENT OF PROBLEMS

Body composition and anthropometry measures have a un-disputable influence on not only the performance of a sportsperson

but also influences the sport/game/ event which he would select. Emotional intelligence is also an important factor which influences not only a sports person performance but also his on field and off field individuality, it determines his overall personality.

Every individual sport/ game/event demands its own requirement for better performance in the same and gradually the event selected also influences the body composition, anthropometric measures and the emotional intelligence of people being acquainted with it for many years.

Thus researcher willfully wants to make an effort to study these aspects among body builders and athletes, hence has decided to select the topic as **"Analysis of body composition, anthropometric measures and emotional intelligence among body builders and athletes."**

OPERATIONAL DEFINITIONS

Body composition

Body composition refers to the relative proportions by weight of body fat and lean tissue. It is not same thing which could be standardized. It differs according to the age, event, game, food habits, environment, race and competitive performance.

Anthropometry

Anthropometry is the science of measuring the human body and its parts. It is used as an aid to the study of human evolution and variation.

Anthropometry literally means the measurement of man. It constitutes the systematized techniques for taking measurement of man, living or dead, in order to express in a qualitative manner the

dimension of the body. Anthropometry is frequently viewed as the traditional and perhaps the basic tool in physical anthropology, but it has a long tradition of use in physical education.

Emotional intelligence

Emotion is derived from Latin word emovere which means to stir up to agitate or excite.

An emotion is an affective experience that accompanies generalized Inner adjustment and mental and physiological stirred up states in the individual and that shows itself in its overall behavior**.** And quotient means ratio.

According to Standford dictionary "Emotions are innate responses (hereditary reaction patterns) essentially chaotic in nature involving the whole body in their expression but particularly the glandular and visceral systems and their nervous connections and having intimate relationship with preservation of the individuals and the species."

Self-awareness is the capacity for introspection and the ability to recognize oneself as an individual separate from the environment and other individuals. It is not to be confused with consciousness in the sense of quality. While consciousness is a term given to being aware of one's environment and body and lifestyle, self-awareness is the recognition of that awareness.

Empathy is the capacity to understand or feel what another being (a human or non-human animal) is experiencing from within the other being's frame of reference, i.e., the capacity to place oneself

in another's position. There are many definitions for empathy which encompass a broad range of emotional states. Types of empathy include cognitive empathy, emotional empathy, and somatic empathy. In the development of human empathy, individual differences appear, ranging from no apparent empathic ability, or empathy which is harmful to self or others, to well-balanced empathy, including the ability to distinguish between self and other. Various theories and aspects of empathy have been researched, including empathy within nonhuman animals.

Self motivation

Ability to do what needs to be done, without influence from other people or situations. People with self motivation can find a reason and strength to complete a task, even when challenging, without giving up or needing another to encourage them

Emotional stability refers to a person's ability to remain calm or even keel when faced with pressure or stress. Someone who is emotionally unstable is more volatile, which means the person faces an increased risk of reacting with violent or harmful behaviors when provoked

Managing Relationships

Our self-esteem, contentment and capacity to flourish are influenced significantly by our relationships with family, friends or partners. Healthy relationships can provide us with support, affection, excitement and love. However, when relationships go wrong, they can be a source of distress and sorrow.

Integrity is the quality of being honest and having strong moral principles; moral uprightness. It is generally a personal choice to uphold oneself to consistent moral and ethical standards.

Self development covers activities that improve awareness and identity, develop talents and potential, build human capital and facilitate employability, enhance quality of life and contribute to the realization of dreams and aspirations. Not limited to self-help, the concept involves formal and informal activities for developing others in roles such as teacher, guide, counselor, manager, life coach or mentor. When personal development takes place in the context of institutions, it refers to the methods, programs, tools, techniques, and assessment systems that support human development at the individual level in organizations.

Value orientation (VO) is a person's preference about how to allocate resources (e.g. money) between the self and another person. VO corresponds to how much weight a person attaches to the welfare of others in relation to the own. Since people are assumed to vary in the weight they attach to other peoples' outcomes in relation to their own, VO is an individual difference variable. The general concept underlying VO has become widely studied in a variety of different scientific disciplines, such as economics, sociology, and biology under a multitude of different names (e.g. social preferences, other-regarding preferences, welfare tradeoff ratios, social motives, etc.)

Commitment can be stated as:

A promise to do or give something

A promise to be loyal to someone or something

The attitude of someone who works very hard to do or support something

Altruism refers to behavior by an individual that increases the fitness of another individual while decreasing the fitness of the actor. Altruism in this sense is different from the philosophical concept of altruism, in which an action would only be called "altruistic" if it was done with the conscious intention of helping another. In the behavioural sense, there is no such requirement. As such, it is not evaluated in moral terms—it is the consequences of an action for reproductive fitness that determine whether the action is considered altruistic, not the intentions, if any, with which the action is performed.

Athletics

Athletics is termed as mother of all sports events. It mainly consists of track and field events where there is no physical contact and there is no need to overcome his opponent physically. In athletics there is competition not only between other athletes but sometime one competes with his own previous performance.

THE OBJECTIVES OF THE STUDY

- To analyze body composition of body builders and athletes.
- To analyze emotional intelligence of body builders and athletes.
- To enlighten about the essential body composition for each of this groups being selected in the present study for new learners.

ASSUMPTIONS

Toriola comparatively assessed the body composition and anthropometric characteristics of elite male basketball (n=15) and volleyball (n=15) players and male non athletes (n=20) at the university Nigeria. The basketball (4.30) and volleyball (4.40) players who were predominantly ecto-meso morphic and significantly higher ecto-morphic component ($p<0.05$)than the non athletes (2.5). The difference observed between the athletic groups is related to the morphological factors, which influence the basic components of competitive sports performance ages.

Rathee (2009) have investigated the interrelationship between emotional intelligence and adjustment among female college students the results depicted that a significant correlation at 0.01 levels was found between emotional intelligence and overall adjustment, with regard to sports group. The findings of this study have revealed that the sports and physical activities undoubtedly contribute positively to one's emotional intelligence and overall adjustment. It was concluded that both emotional intelligence and overall adjustment do influence each other and are also interrelated.

1.4 HYPOTHESIS

1. It is hypothesized that there exists significant difference among the parameters of skin fold measurement across the Body builders and Athletes.
2. It is hypothesized that body builders have better body composition.
3. It is hypothesized that both body builders and athletes will have anthropometric measures as demanded by their events aiding them to perform better.

4. It is hypothesized that there exist significant difference in some of the parameters of emotional Intelligence among the Body builders and Athletes.
5. It is hypothesized that athletes had better emotional intelligence than the body builders.

SCOPE OF THE STUDY.

1. The study helps us to understand various concepts of physical, physiological structure and concepts of emotional intelligence influencing or dominating the performances of body builders and athletes.
2. The study helps to analyze emotional attributions among the Athletes and body builders.
3. The study helps the coaches, athletes and body builders to reinvent their training schedules and in turn their performance.
4. The study also helps to take the required measures to improve up on the components of body composition, anthropometric measures and emotional intelligence.
5. The study helps us to analyze the reasons behind the differences in physical, anthropometric and emotional aspects of sports person belonging to different sports and games.
6. The study provides with lot of major leads resulting in scope for further research on this topic.

1.5 LIMITATIONS

❖ There are many variables or parameters of emotional intelligence identified under different names all the dimensions are

not tested in the present study. Only 10 variables of Emotional intelligence are selected as in the 'Emotional intelligence scale" designed by Anukool Hyde and others are tested in the present study which is one of the limitations.

❖ The life experiences and background influencing the parameters of Emotional intelligence of the subjects are not taken into consideration which is also considered as a limitation of the present study.

❖ Though all students representing inter-collegiate, state, nationals, inter university and internationals had equal chances of becoming the subjects of the study and no person in particular were pre-fixed for collecting the data. Only sports persons available on a pre informed date at various places, training centers, individual sports clubs, colleges, gyms across five districts namely Hubli, Dharwad, Uttar Kannada, Gadag and Haveri of Karnataka were selected as subjects for the present study which denied complete observation of random sampling in the study is also considered as one of the limitations of the present study.

❖ The study is limited only to selected variables of body composition and not all the components of the body composition and influencing body builders and athletes are considered in the present study.

❖ Whatever the answers given by the subject for the various selected items of the Emotional intelligence inventory is considered to be truthful and no effort is made to access its authenticity.

1.6 DELIMITATION:

❖ The study is delimited to 200 sportsmen- 100 body builders and 100 athletes in five districts namely Hubli, Dharwad, Uttar Kannada, Gadag and Haveri of Karnataka.

- ❖ Only men are selected as subjects for the present study.
- ❖ Only sports persons participating in inter-collegiate, state, university, inter University/ all India University, nationals and international competitions among athletics are considered as subjects in the present study.
- ❖ Subject selected as sample related to body building for the present study had to be professionally practicing at least from previous three years.
- ❖ To evaluate skin folds measurements are taken at Abdominal, chest, and Arm skin fold are measured.
- ❖ To evaluate Anthropometric measurements Anatomical sits, Biacromial diameter(R+L), Bitochanteric diameter, chest width, Bi-iliac diameter, Knee width(R+L) Ankle diameter(R+L), Elbow width(R+L), and Wrist diameter(R+L) are measured.
- ❖ To evaluate the variables of emotional intelligence all 10 traits from emotional intelligence scale designed by **Anukool Hyde, Sanjoy Pethe and Upinder Dhar is** selected which can be stated as under:

a) Self awareness
b) Empathy
c) Self motivation
d) Emotional stability
e) Managing relations
f) Integrity
g) Self development
h) Value orientation
i) Commitment and
j) Altruistic behavior.

Research Method: The Methodology of the present study is as per the survey method. The present research needs the collection of data from a vast area and from various samples. The samples here cannot be gathered in a place. They have to be approached by the researcher. For this no other method than survey method is useful.

Population: 100 body builders and 100 athletes from five districts ie., Hubli, Dharwad, Haveri. Gadag and Uttar Kannada.

Selection of Samples:

The study aimed at analyzing body composition, anthropometric measures and emotional intelligence of body builders and athletes. For this purpose 300 subjects will be selected- 100 body builders and 100 athletes from five districts. Athletes who have represented at least one among the following: Inter Collegiate, State, University, AIU and India, and body builders who are practicing body building from at least three years, who were within the age group of 18 to 28 years will be selected as subjects for the present study.

Tools of the study:

Skin fold calipers, breadth calipers & questionnaires to evaluate the variables of emotional intelligence all 10 traits from emotional intelligence scale designed by **Anukool Hyde, Sanjoy Pethe and Upinder Dhar**

Statistical parameters:

As the researcher is interested in eliciting the differences in the Body composition, anthropometric measures and emotional intelligence, following variables are measured pertaining to each of them.

Body composition- skin fold's measurements are taken at abdominal, chest, and Arm skin fold.

Anthropometric measures- Anatomical sits Biacromial diameter(R+L), Bitochanteric diameter, chest width, Bi-iliac diameter, Knee width(R+L) Ankle diameter(R+L), Elbow width(R+L), and Wrist diameter(R+L) are measured.

Emotional intelligence

a) Self awareness
b) Empathy
c) Self motivation
d) Emotional stability
e) Managing relations
f) Integrity
g) Self development
h) Value orientation
i) Commitment and
j) Altruistic behavior.

Procedure:

Researcher himself will visit the subjects selected along with his assistants at their own places, practice venues, colleges, district stadiums, specific clubs and gym centers on particular dates, which will be decided on obtaining permission from the coaches of the selected subjects and the subjects themselves. The researcher will explain each and every subject selected for the study aboout the nature and purpose of the study, the questionnaire selected for the study, its content and method to answering the questionnaire. As collection of data regarding the body composition and anthropometric measures had to be done physically, subjects were explained about the expected clothing when they arrive for the measurements and the places where measurements

will be taken had to be explained in detail. After explaining everything about the measurement of body composition, anthropometric measures, the questionnaire and its content the investigator with the help of required assistance will measure the body composition, anthropometric sites and duly records all measurements, he distributes the questionnaire and reads out all the instructions and explains them to the subjects. Each and every question is read out and explained so that the selected pupil will easily understand the same. As the subjects would answer the questionnaire the investigator will clarify all the doubts of the subjects whenever asked for. The data of body composition and anthropometric measures will be standardized as per the standard norms, which will be available for further statistical analysis. The duly answered questionnaires were collected back and scored as per the instructions in the respective manual. Each question was classified under the relative variable and standardized as per the norms mentioned in the manual. The data obtained was thus standardized for further statistical treatment. The data standardized as per the norms in the manual will be subjected to following statistical analysis facilitating interpretations:

- Mean and standard deviation will be found out for all the variables or dimensions of the temperament among both the body builders and athletes.
- Significant difference will be established as per the Z test.
- Significant difference is established at 0.05 level of significance as per the Z test.
- Interpretations will be drawn on the basis of the results obtained through the above mentioned statistical analysis, various previous research establishments and present societal trends influencing the subjects.

TIME SCHEDULE

The research study will follow following time schedule.

- July 2016 Research Proposal submission
- July 2016 to Dec.2016 preparations for Chapter I and visits to the various places for Primary data collection
- January 2017 to June 2017: Selection of the Subjects and preparation for questionnaire for data collection
- July 2017 to Dec. 2017: data collection by questionnaire.
- Jan 2018 to March 2018: Data Analysis
- April 2018 to Jun 2018: Report writing, Synopsis Submission and preparation for Pre-Viva voice
- June 2018 Onwards: Thesis submission

ESTIMATED BUDGET FOR THE PRESENT RESEARCH

1. **TRAVEL EXPENDITURES : 100000-00**
2. **STATIONARY : 50000-00**
3. **EQUIPMENT : 25000-00**
4. **MISCELLANEOUS : 25000-00**

200000-00

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VINAY S
RESEARCH SCHOLAR

Dr. KALEPWAR Y.D
RESEARCH GUIDE
SAS COLLEGE, MUKHED